

REMARKS

Claims 1-30 are pending. The provisional election to prosecute the invention of Group I, Claims 1-28, is affirmed. Claims 29 and 30 have been withdrawn from further consideration by the Examiner as being drawn to a non-elected invention. ~~Claims 1-28 have been rejected.~~ Claims 1, 15, and 24 have been amended. Claims 14 and 23 have been canceled. In view of the above amendments and the following remarks, applicant respectfully requests reconsideration and allowance of Claims 1-13, 15-22, and 24-28.

This invention is directed to a novel, water-based paint comprising a binding agent and a debonding agent. An advantage of this invention over other water-based paints is that the paint develops a strong bond to some substrates (such as an edge sealed oriented strandboard) by virtue of the polymeric binding agent, but does not develop a strong bond to metal substrates (such as a metal stencil) by virtue of the debonding agent active on metal surfaces. Thus, the paint composition of the invention binds to the sealed edge of oriented strandboard, but not to the metal stencil through which the paint is applied.

Statutory Double Patenting

Claims 24, 26, and 27 have been provisionally rejected under 35 U.S.C. § 101 as claiming the same invention as Claims 24, 26, and 27 of copending Application No. 09/943,855.

Applicant respectfully requests withdrawal of the rejection. Amended Claim 24 of copending Application No. 09/943,855 recites a water-based paint composition, comprising an opacifying agent that includes titanium dioxide, a polymeric binding agent that includes an acrylic-based latex, and a debonding agent active on metal surfaces that includes soybean oil, wherein the soybean oil is present in the composition in an amount from about 10 to about 50% by weight based on the total weight of the composition. Amended Claim 24 of the present application recites a water-based paint composition, comprising an opacifying agent that includes

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titanium dioxide, a viscosity enhancing agent that includes hydroxyethylcellulose, a surfactant that includes a salt derived from morpholine and a long-chain carboxylic acid, a polymeric binding agent that includes acrylic latex, and a debonding agent active on metal surfaces that includes soybean oil, wherein the soybean oil is present in the composition in an amount from about 10 to about 50% by weight based on the total weight of the composition.

Non-Statutory Double Patenting

Claims 1-5, 7-23, and 28 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 2-3, 7-23, and 28 of copending Application No. 09/943,885 in view of U.S. Patent No. 5,700,522 to Nonweiler et al. Applicant notes the provisional rejection.

The Rejection of Claims 1-7, 10, and 14-22 Under 35 U.S.C. § 102(b)

Claims 1-7, 10, and 14-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,510,409 to Romano; Claims 1-7, 14, and 16-23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,792,357 to Bier; and Claims 1-5, 7, and 14-21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,959,224 to Coleman. Applicant respectfully requests withdrawal of these rejections for the following reasons.

The Office Action cites the Romano reference as teaching a water-based paint comprising 40-60% water, 15-25% binder that is a latex such as polyacrylic acid, 15-25% titanium dioxide, vegetable oil such as soybean or rapeseed oil, fumed silica, and 1-5% of each of thickener such as carboxymethylcellulose, dispersant, defoamer, preservative, coalescing agent, and surfactant. The Office Action cites the Bier reference as teaching water-based paint comprising 1-10% hydroxyethylcellulose or carboxymethylcellulose, up to 20% titanium dioxide, up to 20% acrylic binder, up to 15% silicone oil, up to 2% surfactant, up to 5% colloidal (i.e., fumed) silica, up to

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0.5% anti-foaming agent, and preservative. The Office Action cites the Coleman reference as teaching water-based paint comprising latex (i.e., binder) obtained from alkly (meth)acrylates, titanium dioxide, 0.1-1% surfactant, thickening agent such as hydroxyethylcellulose, dispersant, plasticizer, preservative, vegetable oil such as soybean oil, and defoamer.

Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention. Because none of the cited references describe the invention as now claimed, none of the references are anticipatory. Amended Claim 1 recites a water-based paint composition that includes an opacifying agent, a viscosity enhancing agent, a surfactant, a polymeric binding agent, and a debonding agent active on metal surfaces comprising a vegetable oil, wherein the vegetable oil is present in the composition in an amount from about 10 to about 50% by weight based on the total weight of the composition.

In contrast to the claimed invention, none of the cited references teaches a vegetable oil debonding agent active on metal surfaces at a level of about 10 to about 50% by weight of the composition. The Romano reference describes a foam control agent (comprising soybean oil, hydrophobic silica, and silicone compound) that is mixed into latex paints in an amount of only 0.1 to 1.0% by weight of the latex paint (col. 2, lines 49-52, and Example 4, col. 4, lines 5-28); the Bier reference describes anti-foaming agents, such as anti-foam silicones or fatty alcohols, present in the paint in an amount up to 0.5% by weight of the paint (col. 5, lines 37-42); and the Coleman reference describes a vegetable oil defoamer that is mixed into the latex paint in an amount of less than 9% by weight of the formulation (calculated from Table I, col. 20, line 56-col. 21, line 40). Thus, the invention as now claimed is not anticipated by the teachings of any of the cited references.

Furthermore, the claimed invention is not obvious in view of the teachings of the cited references. Three basic criteria are necessary to establish a prima facie case of obviousness: the

prior art reference(s) must teach or suggest all of the claim limitations; there must be some suggestion or motivation, either in the references or in the knowledge of one skilled in the art, to modify the reference or to combine reference teachings; and, there must be a reasonable expectation of success.

The claimed invention is not obvious over the cited references for at least two reasons. First, because none of the cited references teach or suggest a debonding agent active on metal surfaces comprising a vegetable oil, wherein the vegetable oil is present in the composition in an amount from about 10 to about 50% by weight based on the total weight of the composition, the cited references do not teach or suggest all of the claim limitations. Second, no suggestion or motivation exists, either in the references or in the knowledge of one skilled in the art, to combine, in a water-based paint composition, vegetable oil in an amount from about 10 to about 50% by weight of the paint composition with polymeric binding agent. Although vegetable oil (in an amount less than 10% by weight of the paint composition) has been used as a defoaming agent, vegetable oil in an amount greater than 10% by weight of the paint composition has the effect of counteracting the binding agent and generally inhibiting adhesion to some surfaces, such as metal surfaces. This combination would thus create a weak bond to some surfaces and would render the paint compositions of the three primary references inoperable for their purposes.

The Rejection of Claims 8-13 and 24-28 Under 35 U.S.C. § 103(a)

Claims 8-13 and 24-28 stand rejected under 35 U.S.C. § 103(a): (1) Claims 8 and 9 stand rejected as unpatentable over the Romano, Bier, or Coleman references in view of U.S. Patent No. 2,374,678 to Gruenwald; (2) Claims 10-13 stand rejected as unpatentable over the Bier or Coleman references in view of U.S. Patent No. 6,013,721 to Schall et al.; (3) Claims 11-13 stand rejected as unpatentable over the Romano reference in view of the Schall et al. reference;

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(4) Claims 24-28 stand rejected as unpatentable over the Romano reference in view of the Gruenwald and Nonweiler et al. references; (5) Claims 24 and 26-28 stand rejected as unpatentable over the Bier reference in view of the Gruenwald reference; (6) Claims 24 and ~~26-28 stand rejected as unpatentable over the Coleman reference in view of the Gruenwald~~ reference; and, (7) Claim 25 stands rejected as unpatentable over the Coleman reference in view of the Gruenwald reference as applied to Claims 24 and 26-28, and further in view of the Nonweiler et al. reference. Claims 8-13 depend from Claim 1 and Claims 25-28 depend from Claim 24. Claims 1 and 24 have been amended. Because the cited references do not describe the invention as now claimed and further fail to teach, suggest, provide motivation to make, or otherwise render obvious the claimed invention, applicant respectfully requests that the rejections be withdrawn.

The Office Action cites the Gruenwald reference as teaching a surfactant that is derived from morpholine and a long-chain (i.e., C₁₂-C₃₆) carboxylic acid. The motivation for using such surfactant is that it is inexpensive, imparts enhanced surface-active properties, and produces better pigment dispersions. The Schall reference is cited as teaching the use of binder with glass transition temperature of 10-40°C such as butyl acrylate/methyl methacrylate copolymer. The motivation for using such a binder is to control the adhesion of paint to substrate. The Nonweiler reference is cited as teaching the use of thickeners, such as hydroxyethylcellulose, to control the rheology and viscosity of the paint.

Claims 8 and 9 stand rejected as unpatentable over the Romano, Bier, or Coleman references in view of the Gruenwald reference. The Office Action states that in light of this combination it would have been obvious to one of ordinary skill in the art to use the surfactant as taught by Gruenwald in the paint of Romano, Bier, or Coleman, in order to produce a paint with

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superior surfactant properties and effective pigment dispersion, and thereby arrive at the claimed invention.

Claims 8 and 9 depend from Claim 1. As noted above, amended Claim 1 (which now ~~recites a water-based paint composition~~ comprising an opacifying agent, a viscosity enhancing agent, a surfactant, a polymeric binding agent, and a debonding agent active on metal surfaces comprising a vegetable oil, wherein the vegetable oil is present in the composition in an amount from about 10 to about 50% by weight based on the total weight of the composition) is neither taught nor suggested by the teachings of the Romano, Bier, Coleman, or Gruenwald references. The cited references, either alone or in combination, fail to teach or suggest a composition that includes a vegetable oil debonding agent active on metal surfaces in an amount from about 10 to about 50% by weight of the composition.

Claims 10-13 stand rejected as unpatentable over the Bier or Coleman references in view of the Schall et al. reference. The Office Action states that it would have been obvious to one of ordinary skill in the art to use the specific binder described by Schall et al. in the paint of either Bier or Coleman in order to produce a paint that effectively adheres to a substrate, and thereby arrive at the claimed invention.

Claims 10-13 depend from Claim 1. As noted above, Claim 1 has been amended. The cited references do not teach or suggest all of the limitations of the invention as now claimed: a paint composition that includes a vegetable oil debonding agent active on metal surfaces in an amount from about 10 to about 50% by weight of the composition.

Moreover, there is no motivation to combine the Bier or Coleman references with the Schall reference. The advantage of the coating composition taught by the Schall reference is that it has a strong bond to asphalt, concrete, glass, metal, and wood surfaces (col. 11, lines 41-45 and col. 12, lines 24-27). This strong bond would be lessened or negated by the anti-foaming agents

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disclosed by the Bier or Coleman references (silicone or vegetable oil). Vegetable oil in an amount from about 10 to about 50% by weight of the formulation, as claimed in the present invention, creates a weak bond to metal and, consequently, would render the composition of the Schall et al. reference inoperable for its purpose.

Claims 11-13 stand rejected as unpatentable over the Romano reference in view of the Schall et al. reference. Claims 11-13 depend from Claim 1, which has been amended. The cited references fail to teach a vegetable oil debonding agent active on metal surfaces in an amount from about 10 to about 50% by weight of the formulation.

There is no motivation or suggestion to combine the teachings of the Romano and Schall references. The advantage of the coating composition taught by the Schall reference would be lessened or negated by the anti-foaming agents described by the Romano reference (soybean oil). Vegetable oil in an amount from about 10 to about 50% by weight of the composition, as claimed in the present invention, would create a weak bond to metal and, consequently, would render the composition of the Schall et al. reference inoperable for its purpose.

Claims 24-28 stand rejected as unpatentable over the Romano reference in view of the Gruenwald and Nonweiler et al. references. The Office Action states that in view of this combination it would have been obvious to one of ordinary skill in the art to use the surfactant in the paint described by the Romano reference to produce a paint with superior surfactant properties and effective pigment dispersion as well as paint with viscosity suitable for its end use, and thereby arrive at the claimed invention.

Claim 24 has been amended to recite a water-based paint composition comprising titanium dioxide, a viscosity enhancing agent comprising hydroxyethylcellulose; a surfactant comprising a salt derived from morpholine and a long-chain carboxylic acid, a polymeric binding agent comprising acrylic latex, and a debonding agent active on metal surfaces comprising

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soybean oil wherein the soybean oil is present in the composition in an amount from about 10 to about 50% by weight based on the total weight of the composition. Claims 25-28 depend from Claim 24.

~~None of the references teach a composition that includes a soybean oil debonding agent~~
active on metal surfaces in an amount from about 10 to about 50% by weight of the composition.

Claims 24 and 26-28 stand rejected as being unpatentable over the Bier reference in view of the Gruenwald reference. Claims 24 and 26-28 stand rejected as unpatentable over the Coleman reference in view of the Gruenwald reference. Claim 25 stands rejected as unpatentable over the Coleman reference in view of the Gruenwald reference and further in view of the Nonweiler et al. reference. As noted above, the cited references, either alone or in combination, fail to teach or suggest the invention as now claimed: a composition that includes a soybean oil debonding agent active on metal surfaces.

Finally, the Office Action made of record, but did not rely upon, U.S. Patent No. 6,069,189 to Kramer et al. Applicant disagrees with Examiner's statement that Kramer et al. is pertinent to the presently claimed invention.

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CONCLUSION

In view of the above amendments and foregoing remarks, applicant believes that Claims 1-13, 15-22, and 24-28 are in condition for allowance. If any issues remain that may be ~~expeditiously addressed in a telephone interview~~, the Examiner is encouraged to telephone applicant's attorney at 206.695.1755.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE OCTOBER 8, 2002

In the Claims:

1. (Amended) A water-based paint composition, comprising:

~~(a) an opacifying agent;~~

(b) a viscosity enhancing agent;

(c) a surfactant

(d) a polymeric binding agent; and

(e) a debonding agent active on metal surfaces comprising a vegetable oil,

wherein the vegetable oil is present in the composition in an amount from about 10 to about 50% by weight based on the total weight of the composition.

15. (Amended) The composition of Claim [14]1, wherein the vegetable oil is at least one of soybean oil, corn oil, sunflower oil, castor oil, rapeseed oil, linseed oil, sunflower seed oil, and safflower oil.

24. (Amended) A water-based paint composition, comprising:

(a) an opacifying agent comprising titanium dioxide;

(b) a viscosity enhancing agent comprising hydroxyethylcellulose;

(c) a surfactant comprising a salt derived from morpholine and a long-chain carboxylic acid;

(d) a polymeric binding agent comprising acrylic latex; and

(e) a debonding agent active on metal surfaces comprising soybean oil,

wherein the soybean oil is present in the composition in an amount from about 10 to about 50% by weight based on the total weight of the composition.

Claims 14 and 23 have been canceled.